

*From the
Tele-photo
down to the
Micro picture*



Praktica FX 2

35 mm Reflex Camera with Interchangeable Lenses

Dear Photo Friend!

The miniature reflex camera "Praktica FX 2", a masterpiece of German craftsmanship, discloses to the amateur and professional photographer the extremely versatile and wondrous territories of photography.

The advantages of the single-lens reflex camera system become particularly obvious in the Praktica FX 2. Already before the exposure, the subject is visible, free from parallax error, in the ground-glass image, making it possible to predetermine depth of field and picture composition with utmost accuracy.

Interchangeable lenses of various focal lengths in the Praktica FX 2, some of them with automatic diaphragm, open up a wide range of applicability for tele-photo and close-up exposures.

To complete the finder system, a supplementary reversing prism can be inserted into the finder hood, revealing an upright, laterally correct image.

Shutter wind and film
transport knob with
picture-counting disk

Knob for setting
exposure speeds
and speed groups

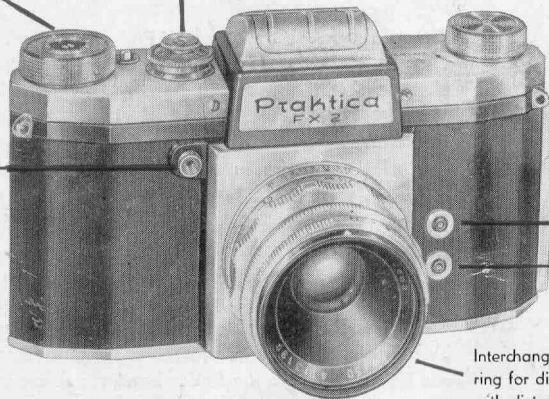
Shutter release
knob with
cable release
connection

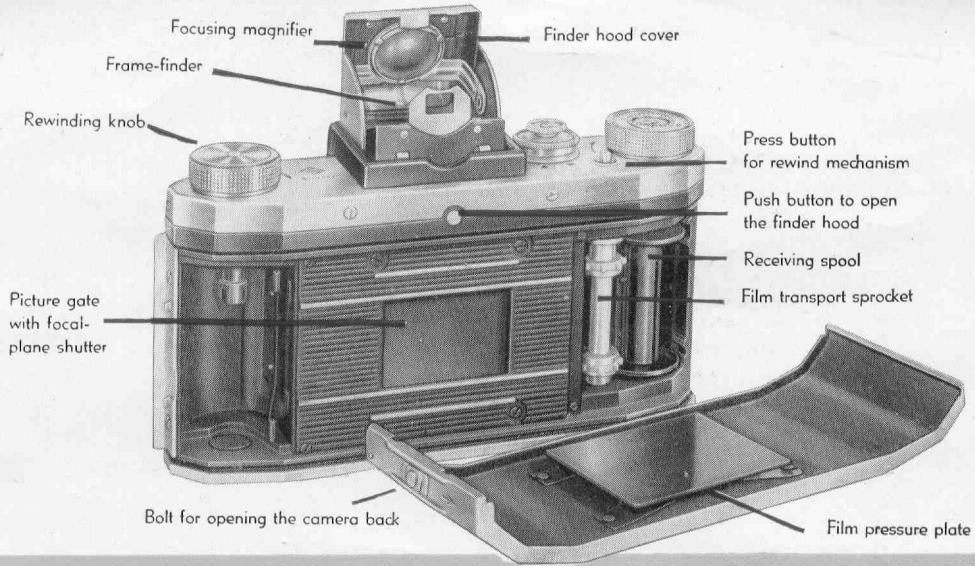
Eyelets for neckstrap

Contact socket X
for flash tubes

Contact socket F
for flash bulbs

Interchangeable lens with adjusting
ring for distance and diaphragm,
with distance, diaphragm
and depth-of-field scales





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Technical Data

Lenses

35 to 500 mm focal length with speeds ranging from $f/1.5$ to $f/8$.
All lenses are coated

Shutter

Focal-plane shutter $\frac{1}{2}$ to $\frac{1}{500}$ sec. and B, synchronized for electronic and regular flash

Finder System

Reflex finder with image field lens and magnifier for critical focusing (free from parallax)
Built-in sports finder
Insertable reversing prism

Film Transport

Coupled with shutter wind, no unintentional double exposures or blanks

Weight

620 grams, without lens

Dimensions

15 x 8 x 4 cm (6 x $3\frac{1}{4}$ x $1\frac{1}{2}$ ins.)



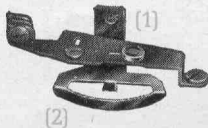
The Lenses

The *Praktica FX 2* may be used with normal or special-type lenses with focal lengths from 35 mm to 500 mm and with speeds up to $f/1.5$, hence making it possible to *penetrate into practically any sphere of photography*.

All the lenses are easily interchangeable by means of their threaded mounts. It is advisable, before changing the lens, to release the camera shutter, so that the mirror, a very sensitive element, will be protected from damage. Any unclean spots on the anti-reflex coating should be removed only with a soft, perfectly clean and grease-free brush. In case there is a film in the camera during lens change, take care to protect the opening from glaring light.

The Pre-setting Diaphragm

When exchanging lenses with the diaphragm pre-setting device, make sure that the pressure lever (2) always rests against the rear stop. If necessary, push it to the rear stop with your finger tip. Should the camera be equipped with an automatic pre-set lens, the arresting knob (1) with the red dot has to be moved to the left (looking at the camera from the front).



Diaphragm scale



Focusing ring



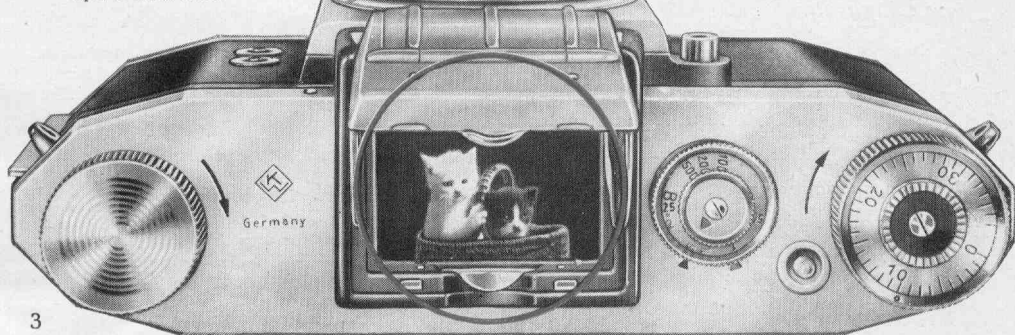
*Distance and
depth-of-field scales*



*Lenses with Diaphragm
pre-setting device*



The ring directly behind the diaphragm ring must be pushed back-wards and adjusted so that its mark meets the desired diaphragm number and clicks in. You can now focus with the lens at full aperture and return to the pre-set diaphragm stop without removing the camera from your eye.



Focusing

is performed by means of the distance-setting ring on the lens mount. This ring has to be turned to the left, or to the right, until the image on the ground-glass screen appears perfectly sharp. During focusing, the lens should be set at full aperture. When using the sports finder, you may either focus beforehand on the ground-glass, or set the distance adjusting ring to an estimated, or measured range.

The Diaphragm

is adjusted by means of the diaphragm ring. The small numbers indicate wide lens apertures, whereas the large diaphragm numbers refer to the smaller apertures. The volume of light entering the camera through the lens can be regulated by the diaphragm. Large diaphragm apertures permit short exposure speeds, small apertures require longer speeds. The next diaphragm number upwards on the scale makes it necessary to double the exposure time.

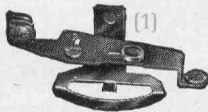
Besides, the diaphragm is a primary means of regulating the depth of field in relation to the various distance settings, as may be seen from the chart on page 7.

The new Automatic Diaphragm

For lenses with automatic diaphragm, the Praktica FX 2 has been equipped with a special release mechanism. Lenses of this type offer a considerable facility with regard to readiness for action owing to the fact that the diaphragm closes down automatically to the pre-set stop. Remove the lens from the camera, and the release mechanism for the automatic diaphragm becomes visible inside the camera front. This mechanism has to be disconnected if other lenses than those with automatic diaphragm are to be used (1).

For lenses with automatic diaphragm, the mechanism is put into working position by pushing the red-marked knob to the left.

To wind up the automatic diaphragm, turn the front tensioning ring on the lens mount as far as it will go to the right. The aperture selected for the exposure is adjustable on the same ring by means of a locking device either before or after the shutter is wound up. Meyer lenses with automatic diaphragm need not to be wound up. Intermediate tubes to be used with automatic lenses must be marked "2".



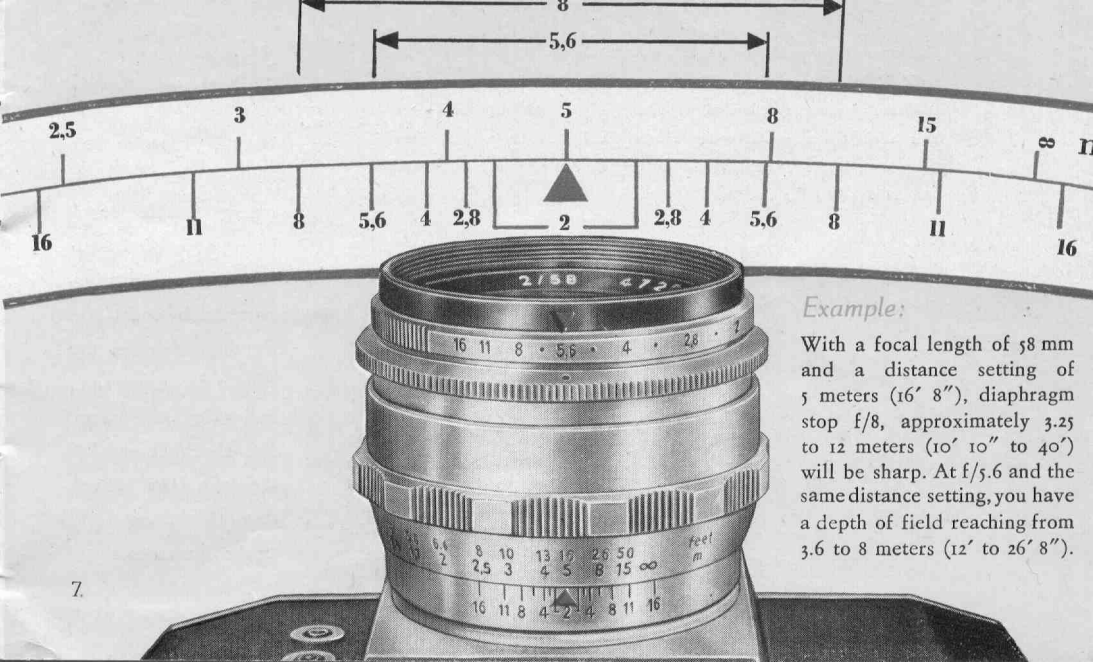
The distance scale

on the Praktica lenses is not of primary importance, focusing chiefly being performed on the field lens. You may, of course, compare the distance on the scale.

This distance scale gains greater value in connection with the parallel-running depth-of-field scale which indicates the range of sharpness pertaining to the various settings.

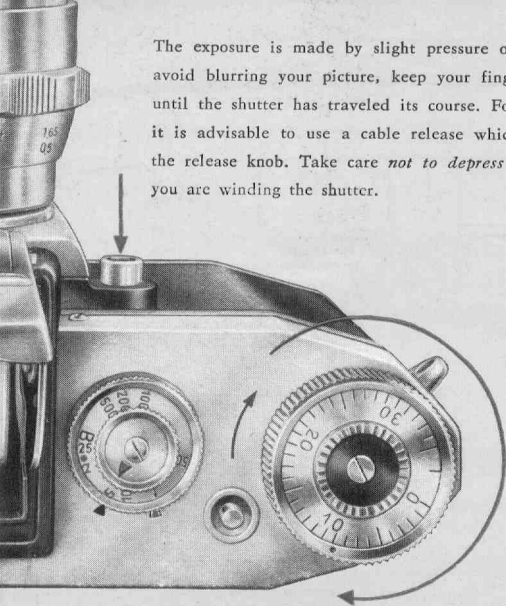
Diaphragm and depth of field

The extent of the depth-of-field is shown, for every diaphragm stop and distance setting, on the depth-of-field scale. The part of the image within the range of the two identical diaphragm numbers indicating the selected lens aperture on the depth-of-field scale will always be sharp. The left-hand numbers signify the depth of field in front, and the right-hand numbers the depth of field at the back of the focal plane.



Example:

With a focal length of 58 mm and a distance setting of 5 meters (16' 8"), diaphragm stop $f/8$, approximately 3.25 to 12 meters (10' 10" to 40') will be sharp. At $f/5.6$ and the same distance setting, you have a depth of field reaching from 3.6 to 8 meters (12' to 26' 8").



The exposure is made by slight pressure on the release knob. To avoid blurring your picture, keep your finger on the release knob until the shutter has traveled its course. For longer time exposures it is advisable to use a cable release which may be screwed into the release knob. Take care *not to depress* the release knob while you are winding the shutter.

One complete clockwise rotation of the film transport knob as far as it will go, cocks the shutter and advances the film to the next frame.

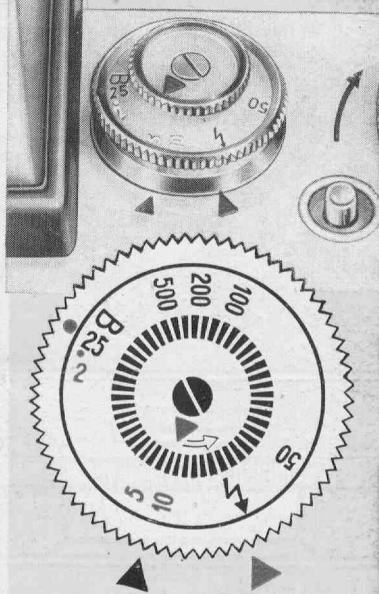
Shutter and film transport

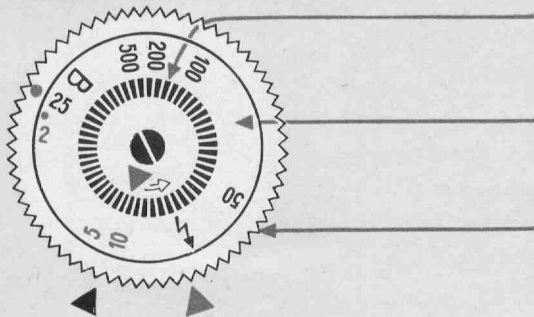
in the Praktica are coupled, hence eliminating double exposures and blanks. A turn of the film transport knob cocks the shutter, advances the film to the next frame, and swings the mirror into the light path of the lens. The picture counter moves one stroke further on.

Setting the shutter speeds

The duration of the exposure is set by means of the speed-setting knob and the milled disk on top of this knob. There are black numerals on the knob marking the short speeds ($1/500$ to $1/25$ sec. and $\frac{1}{2}$ - $1/40$ sec.) and red numerals marking the longer speeds ($1/10$ to $1/2$ sec.), and "B" for any desired length of time.

For short speeds, the red triangle on the milled disk must point towards the black triangle on the camera top, whereas for longer exposures, the red triangle on the disk has to stand opposite the red triangle on the camera top. "B" exposures should be made with the disk set on the short speeds.

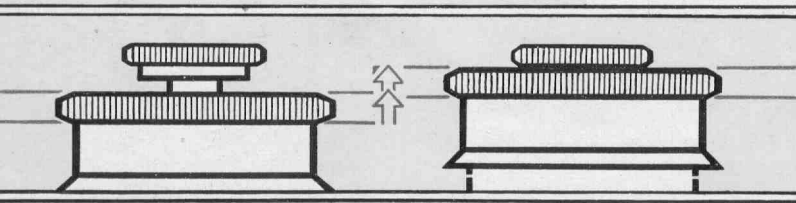




Milled disk with red triangle for setting the shutter to long or short speeds.

Speed-setting knob with engraved numerals for "B", $\frac{1}{2}$ to $\frac{1}{10}$ second and $\frac{1}{25}$ to $\frac{1}{500}$ second and $\frac{1}{4}$.

Outer ring (to be lifted) of the speed-setting knob, with red marking dot.




To set the exposure speed, the outer ring of the speed-setting knob, with the red marking dot, has to be lifted and rotated until the red dot rests next to the desired number. $\frac{1}{2}$ second and $\frac{1}{25}$ second click into the same rest hole.

With the shutter set at "B", you are at liberty to expose for any length of time. The shutter remains open as long as you depress the release knob.

The speed may be set either before or after winding the shutter.

Setting the shutter speeds in the Praktica FX 2 - brief summary of main points

Short instant speeds

Red triangle on milled disk stands opposite black triangle on camera top. Setting for speeds from $\frac{1}{25}$ to $\frac{1}{500}$ second, for  and "B".

Long instant exposures

Red triangle on milled disk stands opposite red triangle on camera top. Setting for $\frac{1}{2}$, $\frac{1}{5}$ and $\frac{1}{10}$ second.

Time exposures

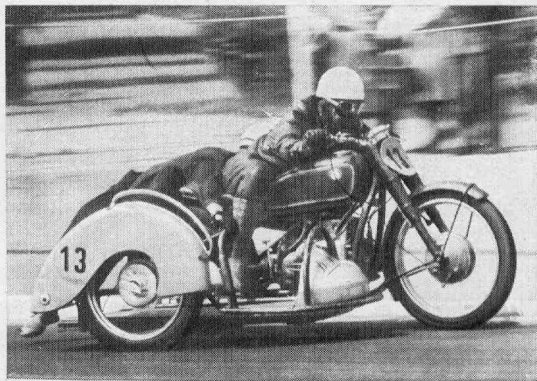
To make exposures at the "B" setting, the red triangle on the milled disk may point either to the black or the red triangle on the camera top.

Long time exposures

These are made with the "B" setting. The shutter is actuated by means of a special cable release.



Nocturnal - long time exposure



Rapid movement - short instant exposure



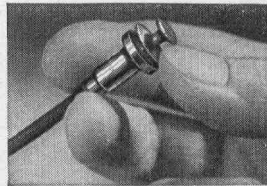
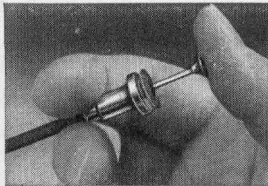
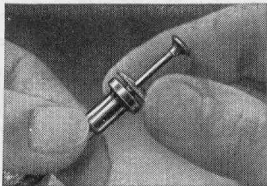
The special cable release

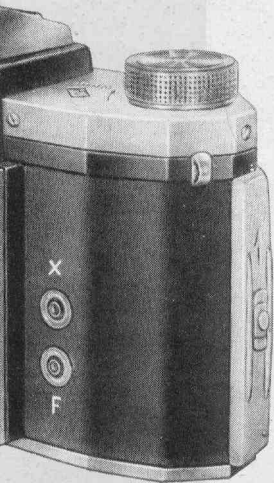
The special cable release permits exposing for any length of time. The shutter having been set at "B", you depress the release plunger, thereby locking the little knurled plate and keeping the shutter open. By slight pressure on the knurled plate it becomes unlocked, followed by closing of the shutter.

If you depress the knurled plate and turn it to the right before pushing in the plunger, the mechanism is not locked and the cable release works in the ordinary manner.

As soon as you remove your thumb from the plunger knob, the shutter closes automatically.

Almost motionless - long instant exposure





Flash synchronization

On the front of the camera are two bipolar contact sockets, the X contact (above) for electronic flashes and short-burning flash bulbs, and the F contact (below) for long-burning flash bulbs.

X contact (above):

Shutter speed $\frac{1}{50}$ sec. with a flash duration of 0.1 to 1 ms ($\frac{1}{10000}$ to $\frac{1}{1000}$ sec.). For a flash period of 1 to 5 ms ($\frac{1}{1000}$ to $\frac{1}{200}$ sec.) the shutter has to be set to the $\frac{1}{2}$ mark. This contact is also designed for short-burning flash bulbs, in which case the shutter speed depends on the practical flash period. As a rule, this will be $\frac{1}{25}$, or $\frac{1}{10}$ sec.

F contact (below):

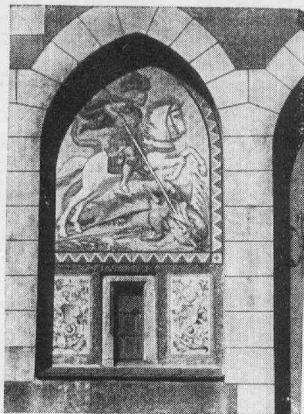
With this contact it is possible to synchronize the shortest shutter speeds to those flash bulbs whose ignition period is less than 10 ms and whose practical flash duration is greater than 20 ms.

Where longer shutter speeds than $\frac{1}{500}$ sec. are being used, the value of 20 ms has to be added to the shutter speed in ms. The resulting total represents the practical duration which has to be achieved by the flash.

Important: Never put the flash bulb into the flash unit before the shutter has been cocked.



Taken with 50 mm focal length



180 mm focal length

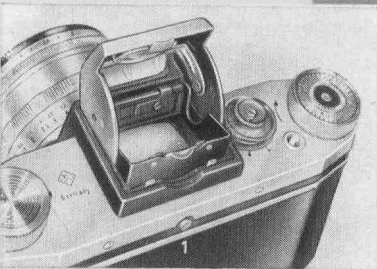


500 mm focal length

The high-quality interchangeable lenses

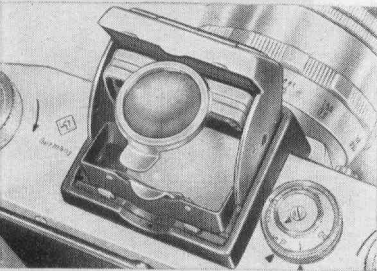
of the Praktica FX 2 permit taking any desired section of the subject from an equidistant viewpoint. Long-focus lenses draw far distant objects close up, whereas short-focus lenses encompass a wide angle of field.

The finder systems



The lighthouse

Depressing a little knob 1 on the back of the camera causes the lighthouse to spring open and the image field lens to become visible. The lighthouse is closed by pressure on the lighthouse cap, whereby all the parts are folded automatically into their original position, except the rear finder eyepiece which has to be pushed in beforehand.

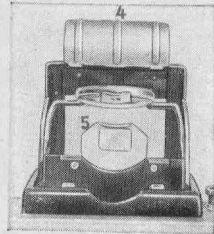


The magnifying lens

For critical focusing of the finder image a magnifying lens may be swung in, yielding an approximately 4fold magnification of the ground-glass image.

The sports finder

Rapidly moving objects may be taken with the direct-vision frame finder. The flap of lighthood cap 4 has to be swung up, the magnifier brought into operating position and rear eyepiece 5 pulled up. The eyepiece must be pushed in again before the lighthood is closed.



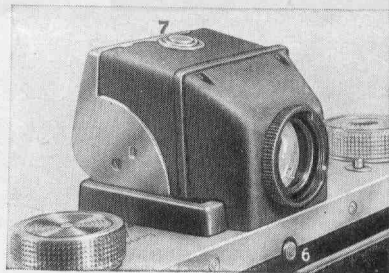
The reversible prism

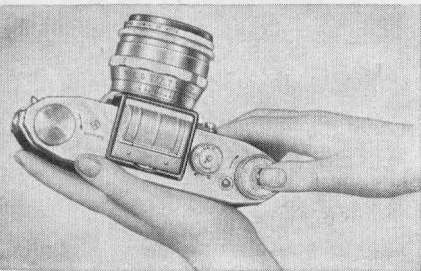
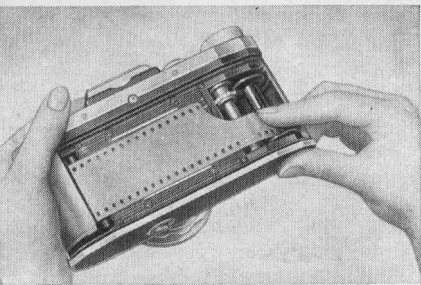
The prism reveals, at eye-level, an upright and laterally correct reflex image. This is of great advantage in sports scenes where you can follow your subject in the direction of its movements.



Magnification of finder image:
approx: 4 times.

The reversible prism is inserted into the open lighthood from above, while the latch button is being depressed, whereupon it is bolted by means of fastening knob 7.



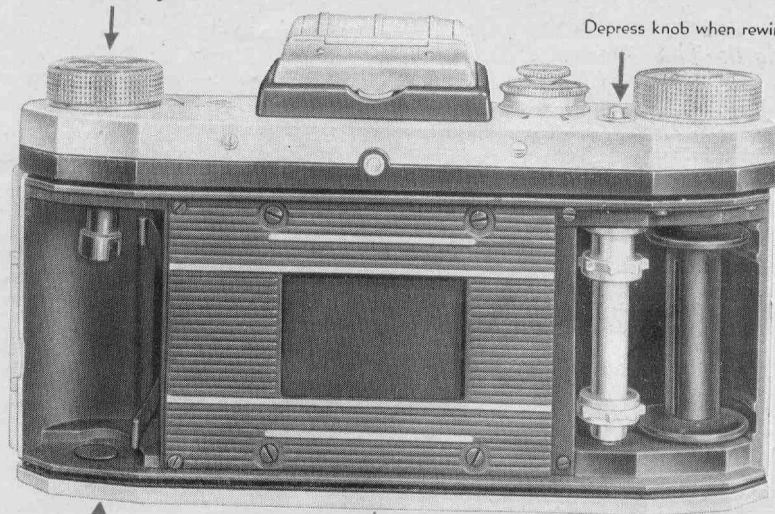


The film-feed mechanism

By pushing of the bolt in the direction of the arrow, the camera back is unlocked and may be taken off. Spool holds, parts of the transport mechanism, and the focal plane shutter are now open to view. Never touch the shutter curtains! Pull out film rewind knob and place the film cartridge into the feeding-spool bearer with the film leader, coating downwards, pointing towards the receiving spool. Draw approximately 10 cm of film out of the cartridge and fix the beginning of the film into the slit in the receiving spool. Make sure that the sprocket teeth catch the film perforation. Advance the film by turning the transport knob. Link the camera back into its groove and close it with slight pressure. The latch must snap in audibly. You now expose two blanks. Check the transport mechanism by paying attention, while winding the shutter, that the rewind knob rotates in the opposite direction of the arrow. After these two blank exposures you set the counting mechanism on stroke 1 – and your Praktica is ready for picture-taking.

Pull out rewind knob before
inserting film cartridge

Depress knob when rewinding



Place film cartridge into
feeding-spool bearer

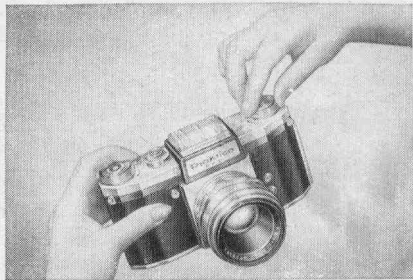
Do not touch
shutter curtains

Sprocket teeth

Receiving spool

Removing the film

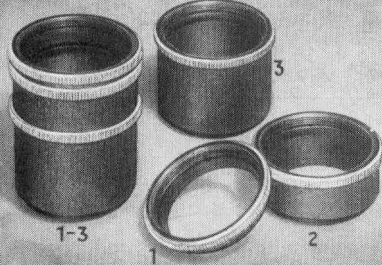
At the end of the film, you will feel a certain resistance when winding the shutter – a sign that the entire film strip has been exposed and must be rewound into the cartridge. This is done by depressing the release knob of the rewind mechanism and rotating the rewind knob evenly in the direction of the arrow. The film leader slips out of the receiving spool noticeably – whereupon the rewind performance is completed. Open the camera back and take out the cartridge with the exposed film. Do not exchange films in bright sunlight but, if possible, in the shade. The cartridge with the exposed film should be wrapped in light-tight paper, or in its original packing material, before being given away for processing. – The camera is now free to accept a new film.



Negative material

The Praktica FX 2 takes perforated 35 mm cine film, available at your photo dealer's either in cartridges or in bulk. The film strip in a cartridge yields 36 exposures. Sometimes, however, half-length cartridges are used. In case you fill your own cartridges or cassettes, you need 1.60 meters (5' 4") of film for 36 exposures. You can, of course, load shorter lengths if you wish to.

Color films are supplied in the same lengths and packings as black-and-white. It is precisely the color film that goes so well with the Praktica, for you pre-view much of the final effect of the color picture already in the colored ground-glass image. The Praktica lenses are color-corrected, too.



Close-up exposures

The helical focusing mount of the normal lens makes it possible to approach your object up to about 50 cm (20 ins.). Exposures at a shorter distance necessitate the use of extension tubes. These tubes are screwed in between camera and lens, either separately or combined. Tubes 1 to 3 joined together yield a picture ratio of 1:1. You will find various grouping possibilities and distance values in the following table.

The image is viewed in the field lens, the same as for any other exposure.

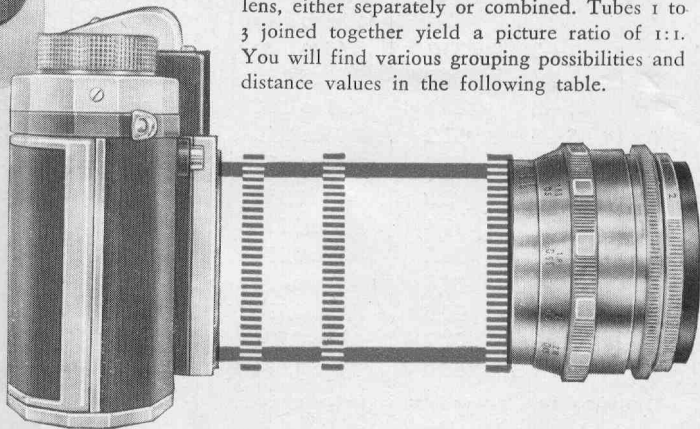


Table for close-up exposures

Focal length	Tube No.	Length of tube (mm)	Picture ratio β	Distance *) of object (mm)	Size of object (mm ²)	Increase in exposure time
50 mm	1	5,8	0,11 to 0,25	455 to 224	207×311 to 96×144	1,2
	2	17,4	0,35 to 0,49	167 to 126	69×104 to 49×74	1,7
	1+2	23,2	0,46 to 0,60	131 to 106	52×78 to 40×60	2,0
	3	34,8	0,69 to 0,83	95 to 83	35×52 to 29×43	2,6
	1+3	40,6	0,81 to 0,94	84 to 76	30×45 to 26×38	2,9
	2+3	52,2	1,05 to 1,19	71 to 65	23×34 to 20×30	3,6
	1+2+3	58,0	1,16 to 1,30	66 to 61	21×31 to 19×28	4,0
58 mm	1	5,8	0,1 to 0,174	622 to 374	240×360 to 138×207	1,2
	2	17,4	0,3 to 0,374	234 to 198	80×120 to 64×96	1,7
	1+2	23,2	0,4 to 0,474	187 to 165	60×90 to 50×76	2,0
	3	34,8	0,6 to 0,674	139 to 128	40×60 to 35×53	2,6
	1+3	40,6	0,7 to 0,774	125 to 117	34×51 to 31×46	2,9
	2+3	52,2	0,9 to 0,974	107 to 103	26×40 to 24×36	3,6
	1+2+3	58,0	1,0 to 1,074	100 to 96	24×36 to 22×33	4,0

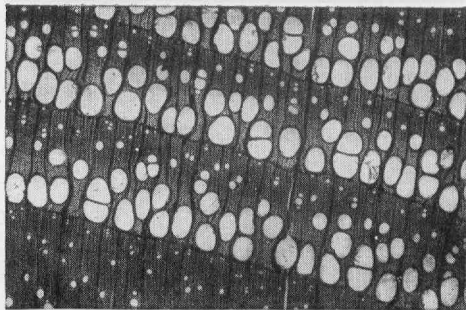
*) measured from extreme front rim of lens mount

Micro exposures

require an additional adapter for connecting the microscope to the camera. Please note that the image field lens of the Praktica is available also with clear glass spot and hairline cross for extreme enlargements.

Color filters

to be used in the Praktica may have slip-on or screw-in mounts. This holds good also for sunshades.



How to hold the camera when making the exposure



When focusing on the image field lens, hold your Praktica in chest level and take it up close to your eye when using the magnifying lens.



For frame-finder viewing (especially in sports scenes) the position of the camera will be naturally adapted to the situation.



The prism finder permits checking sharpness of screen image in direct vision.

Maintenance of the Praktica FX 2

The camera is protected by the Everready Case. The case holds the camera, also during the exposure, without causing the slightest inconvenience. The camera, with screwed-in lens, should always be kept in its case. It must be spotlessly clean, especially those parts which come into contact with the film. Use only a very soft brush to remove any dust.



Never touch the lens surfaces with your fingers. They may be cleaned with a soft leather cloth. This will do no harm to the bluish anti-reflex coating.

Do not, under any condition, interfere with the camera mechanism. Necessary repairs should be carried out at the factory. Oil or grease applied by other than factory expert hands may cause disturbance in functioning and decrease in picture quality. The manufacturers will be pleased to give information or advice at any time.



VEB KAMERA-WERKE NIEDERSEDLITZ
Dresden A 17, Edgar-André-Straße 56

III-9-19 Ag 10/0303 456 200 E

